WHAT IS CLAIMED IS:

1. A method to protect a kidney in a mammalian patient comprising:

a. artificially increasing pressure in a urinary tract of at least one kidney of the patient;

b. reducing a renal function of the kidney by maintaining the increased pressure, and

c. reducing the pressure in the urinary tract to increase the renal function above the reduced renal function.

2. A method as in claim 1 wherein the increase of pressure in the urinary tract is temporary.

3. A method as in claim 1 wherein the increase in the pressure in the urinary tract is reversible.

4. The method as in claim 1 wherein the urinary tract pressure is increased at least to a pressure of 10 to 20 cmH_2O above a pressure level in the urinary tract prior to the artificial increase in pressure.

5. The method as in claim 1 wherein the urinary tract pressure is increased prior to the administration of a contrast agent to the patient.

6. The method as in claim 5 wherein the urinary tract pressure is increased to protect the kidney from an insult.

7. The method as in claim 1 wherein the urinary tract pressure is increased prior to hypotensive surgery and the increased pressure is reduced after the surgery.

8. The method as in claim 1 wherein the urinary tract pressure is increased for at least one hour.

9. The method as in claim 1 wherein the urinary tract pressure is increased by artificially infusing fluid into a bladder of the patient.

10. The method as in claim 9 wherein infused fluid flows into the bladder of the patient without first flowing through the kidney.

11. The method as in claim 9 wherein the infused fluid flows into the bladder through a urethra of the patient prior to entering the bladder.

12. The method as in claim 9 further comprising maintaining an increased pressure in the bladder by applying an elevated pressure to the infused fluid in the bladder.

13. The method as in claim 12 wherein the elevated pressure of the infused fluid is applied by gravity.

14. The method as in claim 12 wherein the infused fluid flows from a container elevated above the patient and flows from the container into the bladder.

15. The method as in claim 14 wherein the container is elevated about the patient a distance in a range of range of 13 centimeters(cm) to 140 cm above the patient.

16. The method as in claim 14 wherein the infused fluid flows from the container into the bladder due to gravity.

17. The method as in claim 1 wherein increasing the urinary tract pressure further comprises artificially distending the bladder of the patient.

18. The method as in claim 17 wherein artificially distending the bladder further comprises artificially infusing fluid into the bladder.

19. The method as in claim 1 wherein increasing the urinary tract pressure further comprises at least partially obstructing a flow of urine from the kidney and through the urinary tract.

20. The method as in claim 1 wherein increasing the urinary tract pressure further comprises at least partially obstructing a flow of urine from the bladder.

21. A method to prevent or treat contrast nephropathy in a mammalian patient undergoing a radiographic procedure comprising:

a. artificially increasing pressure in a urinary tract of at least one kidney of the patient;

b. injecting the contrast agent into a blood vessel of the patient, and

c. reducing pressure in the urinary tract of the kidney.

22. A method as in claim 21 further comprising reducing a renal function of the during a period in which the contrast agent is in the blood of the patient.

23. A method as in claim 21 further comprising, prior to step (a), identifying the patient from a group of patients suffering from one or more of a group of illnesses consisting of chronic renal disease, diabetes and old age, wherein the identified patient is determined to be a particularly risk during injection of a contrast agent.

24. A method as in claim 21 wherein reducing the pressure returns the urinary tract to a pressure that existed before injection of the contrast agent.

25. A method as in claim 21 wherein the increase of pressure in the urinary tract is temporary.

26. A method as in claim 21 wherein the increase in the pressure in the urinary tract is reversible.

27. A method as in claim 21 wherein steps (a), (b) and (c) are preformed sequentially.

28. The method as in claim 21 wherein the urinary tract pressure is increased at least to a pressure of 10 to 20 cmH_2O above a pressure level in the urinary tract before step (a).

29. The method as in claim 21 wherein the urinary tract pressure is increased prior to the administration of the contrast agent to the patient.

30. The method as in claim 29 wherein the urinary tract pressure is a pressure in a bladder of the patient.

31. The method as in claim 21 wherein the urinary tract pressure is increased for at least one hour.

32. The method as in claim 21 wherein the urinary tract pressure is increased by artificially infusing fluid into a bladder of the patient.

33. The method as in claim 32 wherein the infused fluid flows into the bladder of the patient without first flowing through the kidney.

34. The method as in claim 32 wherein the infused fluid flows into the bladder through a urethra of the patient prior to entering the bladder.

35. The method as in claim 33 further comprising maintaining an increased pressure in the bladder by applying an elevated pressure to the infused fluid in the bladder.

36. The method as in claim 35 wherein the elevated pressure of the infused fluid is applied by gravity.

37. The method as in claim 36 wherein the infused fluid flows from a container elevated above the patient and flows from the container into the bladder.

38. The method as in claim 37 wherein the container is elevated about the patient a distance in a range of range of 13 centimeters(cm) to 140 cm above the patient.

39. The method as in claim 37 wherein the infused fluid flows from the container into the bladder due to gravity.

40. The method as in claim 37 further comprising regulating a flow of the infused fluid into the bladder by an adjustable pump.

41. The method as in claim 35 wherein increasing the urinary tract pressure further comprises artificially distending the bladder of the patient.

42. The method as in claim 41 wherein artificially distending the bladder further comprises artificially infusing fluid into the bladder.

43. The method as in claim 35 wherein increasing the urinary tract pressure further comprises at least partially obstructing a flow of urine from the kidney and through the urinary tract.

44. The method as in claim 35 wherein increasing the urinary tract pressure further comprises at least partially obstructing a flow of urine from the bladder.

45. A method to inhibit a natural function of a kidney of a patient during surgery:

a. artificially increasing a pressure in a urinary tract of at least one kidney of the patient,

b. performing the surgery on the patient,

and

c. reducing pressure in the urinary tract of the kidney to substantially a pressure level existing before step (a).

46. A method as in claim 45 wherein the increase of pressure in the urinary tract is temporary.

47. A method as in claim 45 wherein the increase in the pressure in the urinary tract is reversible.

48. The method as in claim 45 wherein the urinary tract pressure is increased at least to a pressure of 10 to 20 cmH_2O above a pressure level in the urinary tract prior to step (a).

49. The method as in claim 45 wherein the urinary tract pressure is a pressure in a bladder of the patient.

50. The method as in claim 45 wherein the urinary tract pressure is increased for at least one hour.

51. The method as in claim 45 wherein the urinary tract pressure is increased by artificially infusing fluid into a bladder of the patient.

52. The method as in claim 51 wherein the infused fluid flows into the bladder through a urethra of the patient prior to entering the bladder.

53. The method as in claim 51 further comprising maintaining an increased pressure in the bladder by applying an elevated pressure to the infused fluid in the bladder.

54. The method as in claim 53 wherein the elevated pressure of the infused fluid is applied by gravity.

55. The method as in claim 54 wherein the infused fluid flows from a container elevated above the patient and flows from the container into the bladder.

56. The method as in claim 55 wherein the container is elevated about the patient a distance in a range of range of 13 centimeters(cm) to 140 cm above the patient.

57. The method as in claim 51 further comprising regulating a flow of the infused fluid into the bladder by an adjustable pump..

58. The method as in claim 45 wherein increasing the urinary tract pressure further comprises artificially distending the bladder of the patient.

59. The method as in claim 58 wherein artificially distending the bladder further comprises artificially infusing fluid into the bladder.

60. The method as in claim 45 wherein increasing the urinary tract pressure further comprises at least partially obstructing a flow of urine from the kidney and through the urinary tract.

61. The method as in claim 45 wherein increasing the urinary tract pressure further comprises at least partially obstructing a flow of urine from the bladder.

62. The method as in claim 45 wherein increasing the urinary tract pressure further comprises increasing the pressure in the urinary tract in a range of 15 cmH_2O to 150 cmH_2O.

63. The method as in claim 45 wherein increasing the urinary tract pressure further comprises increasing the pressure in the urinary tract for at least 30 min but less than 24 hours before the step of restoring pressure.

64. The method as in claim 45 wherein steps (a), (b) and (c) are preformed in sequence.

65. The method as in claim 45 wherein the surgery begins prior to increasing the pressure in the urinary tract.

66. The method as in claim 45 wherein the surgery is substantially completed before reducing the pressure in the urinary tract.

67. A system for preventing or treating acute renal failure in a mammalian patient comprising:

means for artificially increasing pressure in the urinary tract of at least one kidney to reduce a renal function of the kidney;

monitoring means for sensing and displaying a pressure related to the pressure in the means for artificially increasing pressure, and

means for restoring said pressure and to restore the renal function.

68. A system as in claim 67 further comprising mean for maintaining said increased pressure at a predetermined pressure.

69. A system as in claim 67 wherein said means for maintain said increased pressure further comprises means for adjusting the predetermined pressure.

70. A system as in claim 67 wherein the means for artificially increasing pressure further comprises means for artificially increasing pressure means for increasing a bladder pressure.

71. A system as in claim 67 wherein the means for artificially increasing pressure further comprises means for artificially infusing a fluid in to a bladder of the patient.

72. A system as in claim 71 wherein the means for artificially increasing pressure further comprises a catheter having an expandable device at a distal section of the catheter.

73. A system as in claim 72 wherein the expandable device is insertable in a bladder of the patient.

74. A system to treat at least one kidney of a mammalian patient, said system comprising:

a catheter positionable in a urinary tract leading from the at least one kidney;

said catheter having a distal tip with an occlusion device and a pressure sensing port, wherein the occlusion device has an occlusion mode and a passive mode;

a pressure sensor in fluid communication with the pressure sensing port, and

said occlusion device operating in said occlusion mode to elevate a pressure in the urinary tract to a pressure sufficient to inhibit a renal function.

75. A system as in claim 74 wherein the occlusion device is a balloon and further comprising:

a balloon fluid injector in fluid communication with the balloon, and

an actuator for controlling an injection of the balloon fluid into the balloon to switch the occlusion device to the occlusion mode.

76. A system as in claim 74 further comprising a controller switching the occlusion device between the occlusion mode and the passive mode.

77. The system as in claim 74 wherein the occlusion device when in the occlusion mode at least partially obstructs urine output.

78. The system as in claim 77 wherein the occlusion device when in the occlusion mode at least partially obstructs urine output from a bladder of the patient.

79. The system as in claim 74 further comprising a radiocontrast injector and wherein the occlusion device is operated in the occlusion mode during radiocontrast injection.

80. The system as in claim 74 wherein the occlusion device is operated in the occlusion mode during a surgical procedure.

81. A system to temporarily reduce a natural function of at least one kidney of a mammalian patient, said system comprising:

a catheter positionable in a bladder of the patient;

said catheter having a distal end with an occlusion device, and an infusion fluid port;

a pressure device coupled to a fusion fluid supply and elevating the pressure of the infused fluid feed to the fluid port,

wherein the occlusion device has an occlusion mode and a passive mode;

an infusion fluid supply connectable to a proximal section of the catheter and in fluid communication with the fluid port, wherein

the occlusion device has an occlusion mode to occlude the bladder while the infusion fluid is infused into the bladder, and a release mode for allowing the bladder to drain of the infused fluid.

82. A system as in claim 81 further comprising a pressure sensor in fluid communication with the infusion fluid port, wherein said sensor generates a signal indicative of a pressure in the bladder.

83. A system as in claim 81 wherein the occlusion device is a balloon.

84. A system as in claim 81 wherein the pressure device is a pump coupled to a fluid tube extending from the fluid supply to the catheter.

85. A system is in claim 81 wherein the pressure device is a support for the container, wherein the support is elevated above the patient.

86. A system as in claim 81 wherein the infusion fluid supply further comprises:

a container for the infusion fluid coupled to a proximal section of the catheter and in fluid communication with the fluid port;

a conduit extending from the container to the proximal section of the catheter, and

an elevated fluid container support, wherein the container is supported above the patient.

87. A system as in claim 86 wherein the container is supported a predetermined distance is a range of 13 centimeters(cm) to 140 cm above the patient.

88. A system as in claim 86 wherein the container is gravity fed to the catheter.

89. A system as in claim 86 further comprising a pump operatively coupled to for moving fluid in the container to the catheter.

90. A system as in claim 86 further comprising a pump for moving fluid in the container to the catheter.

91. A method to elevate pressure in a urinary at least one kidney of a mammalian patient, said method comprising:

a. inserting a catheter tip into a ureter of the patient;

b. obstructing fluid flow from the kidney and through the ureter by with the tip;

c. elevating a fluid pressure in the ureter by the obstructed fluid flow;

d. affecting a function of the kidney by the elevated fluid pressure, and

e. releasing the obstructed fluid through the ureter by deactivating or removing the catheter tip, and

f. resuming the kidney function after releasing the obstructed fluid.

92. A method as in claim 91 wherein the elevated fluid pressure further comprises injecting fluid through the catheter and into the ureter to elevate the fluid pressure in the ureter and at an outlet of the kidney, and said method further comprises draining the fluid injected into the ureter through the kidney while the fluid continues to be injected into the ureter.

93. A method as in claim 92 wherein the catheter tip is further connected to a pressure sensor detecting a fluid pressure in the ureter and said method further comprises:

monitoring the fluid pressure the ureter while the occlusion device is activated;

injecting the fluid into the ureter if the fluid pressure in the ureter is below a predetermined lower pressure threshold, and

draining fluid from the ureter if the pressure in the bladder is below a predetermined higher pressure threshold.

94. A method as in claim 91 wherein steps (b), (c) and (d) coincide with a radiocontrast injection into the patient.

95. A method as in claim 92 wherein the fluid is injected into the ureter by gravity and from a fluid bag elevated above the patient.

96. A method as in claim 95 wherein the fluid bag is elevated above the patient in a range of 130 cm to 140 cm.

97. A method as in claim 91 further comprising:
cooling the fluid to be injected into the ureter and
cooling the kidneys with the cooled fluid injected into the ureter.